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EXAMINER	
KAU, STEVEN Y	

ART UNIT	PAPER NUMBER
2625	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/586,532	LYNGGAARD, STEFAN	
	Examiner	Art Unit	
	STEVEN KAU	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 July 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/19/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is the initial office action based on the application which is a 371 of PCT/SE05/00177 filed on February 11, 2005.

Preliminary Amendment

- Applicants filed a preliminary amendment on July 19, 2006.
- Claims 4, 5, 6, 7, 9, 10, and 11 have been amended.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 07/19/2006 is in compliance with the provisions of 37 CFR 1.97 with the following exception: IDS document number US-2003/016386-A1 is NOT considered because the US-PGPUB number provided has only 10 digits (it should be eleven digits) and the document number is not a recognizable US-PGPUB number. All other IDS documents are being considered by the examiner as shown in the attached PTO-1449 forms.

Priority

3. Applicant has not submitted a certified copy or copies of foreign application. Therefore 35 U.S.C. 119(a)-(d) requirements are not met, and the examiner cannot verify the filing status of the foreign application.

Provisional Application

4. This Office Action recognizes that applicant claims priority to U.S. Provisional Application Nos. 60/544,238, filed February 11, 2005.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 21, limitations recite, "means for providing a printing device with data representing said code symbol, said printing device being configured to apply dots of marking material in a resolution grid on the substrate, said resolution grid being defined by the dot resolution of the printing device and comprising a two-dimensional array of dot-receiving cells; and means for controlling, based on said data, the printing device to reproduce said code symbol by arranging the reference point of said code symbol inside one of said dot-receiving cells and by applying at least one dot of marking material on the substrate" (emphasis added by the examiner). However, applicant's disclosure does not provide any detail structural information for the means-plus function. The closest description is found in Fig. 2A and Paragraphs 22-25 for "means for providing a printing device with data". For example, "**An arrangement for printing such a high-precision coding pattern is shown in FIG. 2A. The arrangement**

includes a computer 20 and a printer 21. The printer 21 may be communicatively connected to the computer 20, so that a page-describing file 22 can be transferred from the computer 20 to the printer 21" (Para. 22) and "**The printer 21 receives the file 22, reads the page-describing code therein and converts it to adequate printing instructions**" (Par. 24); and Fig. 6 and Paragraph 53 for "means for controlling". For example, "**The print engine controller 64 is then operated to retrieve the rasterized image(s) from the working memory 61 and control a print engine 67 to generate a hardcopy of the rasterized image**" (Par. 53). However, there is no detail structural information for the means-plus function can be found in these paragraphs. Without defining the structure for means-plus functions, one skilled in the art would not be able to understand what structure will perform for the recited function. See MPEP 2181, Identifying a 35 USC 112 Sixth Paragraph Limitation. Further more, according to the following 3-prong analysis criteria:

(A) the claim limitation must be the phrase "means for" or "step for";

(B) the "means for" or "steps for" must be modified by functional language; and

(C) the phrase "means for" or "step for" must NOT be modified by sufficient structure, material, or acts for achieving the specified function.

In addition, "means for" claim limitations of claim 12 is found modified by sufficient structure. For example, claim limitation recites, ""means for providing a printing device with data representing said code symbol, said printing device being configured to apply dots of marking material in a resolution grid on the substrate, said resolution grid being defined by the dot resolution of the printing device and comprising a two-

dimensional array of dot-receiving cells;" (emphasis added by examiner), where "means for" is modified with sufficient function such data representing said code symbol is provided to a printing device. The examiner does not consider that "means for" in claim 12 invokes 112 6th paragraph, and therefore, these claim limitations will be given a broadest reasonable interpretation in light of the supporting disclosure. See MPEP Section 2181.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, and 3 to 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Pettersson et al (US 7,175,095).

Regarding claim 1.

Pettersson discloses a method of reproducing a code symbol on a substrate, said code symbol comprising a mark with a given location with respect to a reference point, said method comprising:

providing a printing device with data representing said code symbol (**i.e. referring to**

Fig. 7, a printer s coupled the coding device, i.e. a personal computer so that the digital representation of code pattern can be sent to the printer for printing out the coding pattern on a sheet of paper, col 11, lines 9-28), said printing device being configured to apply dots of marking material in a resolution grid on the substrate (**referring to Figs 2 and 3, "Each dot has a nominal position 21 which is set by the intersection between the lines 22 in a raster", col 8, lines 14-28**), said resolution grid being defined by the dot resolution of the printing device (**referring to Figs 2, and 3, resolution grid is defined by the raster resolution, or dot resolution such that dot positioning and size are predetermined, col. 8,lines 14-39**) and comprising a two-dimensional array of dot-receiving cells (**i.e. referring to Figs. 2 & 3, the array of dot cell, or dot-receiving cell is two-dimensional**); and controlling (**i.e. referring to Fig. 8, and a processor, col 11, line 56**), based on said data, the printing device to reproduce said code symbol by arranging the reference point of said code symbol inside one of said dot-receiving cells and by applying at least one dot of marking material on the substrate (**referring to Figs. 6 and 8, processor calculates the value of the first parameter, i.e. location of the marks, coordinate pairs, and cell values; thus, a skill in the art can see the reference point, i.e. the unique point of 6 x 6 dot code coordinate, col 8, lines 55-67, of said code symbol must be inside the dot cell and the code pattern is printed out as disclosed in Figs 3 & 4, col 11, line 34 to col 12, line 29**).

Regarding claim 12.

Claim 12 is directed to claim of an arrangement for reproducing a code symbol claim which substantially corresponds to operation of the device in claim 1, with method steps directly corresponding to the function of device elements in claim 1. Thus, claim 12 is rejected as set forth above for claim 1.

Regarding claim 3, in accordance with claim 1.

Pettersson discloses further comprising applying said at least one dot at said given location with respect to the reference point (**referring to Fig. 4, col 8, lines 55-67, the 6x6 dot coordinate for a unique point, i.e. the reference point is at the upper left corner in relation to the dots in the cell of Fig. 4**).

Regarding claim 4, in accordance with claim 1.

Pettersson discloses wherein said mark is displaced from said reference point parallel to a grid line of said resolution grid (**referring to Fig. 4, the reference point is parallel to a gird line**).

Regarding claim 5, in accordance with claim 1.

Pettersson discloses wherein said given location is defined as a displacement of the geometric center of said mark with respect to the reference point (**referring to Fig. 4, code pattern has been divided in to cells and the center cell contains marks and each cell is with respect to the unique point, i.e. the reference point, col 8, lines 40-67**).

Regarding claim 6, in accordance with claim 1.

Pettersson discloses wherein the dot resolution is the rated full dot resolution of the printing device (**referring to Figs. 2-4, raster image has two parameters, i.e. dot location and dot size, which define dot resolution, col 8, lines 25-39**).

Regarding claim 7, in accordance with claim 1.

Pettersson discloses wherein the printing device is a digital printer (**referring to Fig. 7, Printer 75 is the digital printer which is coupled to a computer, col 11, lines 9-28**).

Regarding claim 8, in accordance with claim 7.

Pettersson discloses further comprising generating said data as a page-describing code and controlling the digital printer to convert the page-describing code into a printable image (**i.e. Pettersson discloses an example of generating PostScript file and raster image for direct printout on the printer of Fig. 7, and PostScript file is page-describing code, col 12, lines 27-29**).

Regarding claim 9, in accordance with claim 1.

Pettersson discloses wherein the printing device is a print engine of a digital printer (**referring to Fig. 7, printer 75 must have a print engine for carry out printing**).

Regarding claim 10, in accordance with claim 1.

Pettersson discloses further comprising controlling the printing device to reproduce an additional code symbol on the substrate, the spacing between the reference points of said at least one additional code symbol and said code symbol being controlled to essentially match an integer number of said dot-receiving cells (**i.e.**

referring to Figs. 2-4, "The marks can be optically detectable, and the first parameter and the second parameter can thus also be optically detectable. The parameters can typically relate to shape, color, gray scale, size, angle position, location and/or degree of filling of the marks" indicating that reproducing a plurality of code patterns is controlled and applicable, col 4, lines 10-19).

Regarding claim 11, in accordance with claim 1.

Pettersson discloses which results in a coding layer being reproduced on said substrate (**i.e. coding pattern and reproducing on paper, col 11,line 34 to col 12,line 29**), said coding layer comprising a plurality of code symbols (**see the above discussion**), the reference point of each code symbol being arranged inside one of said dot-receiving cells (**see the above discussion**), said method further comprising: providing further data representing a human-readable information layer to the printing device (**i.e. second information layers contains information being recorded; thus it indicates that it is a human-readable layer, col 4, lines 49-57**); and controlling, based on said data and said further data, the printing device to reproduce the coding and information layers with a spatial match between a given feature in the information layer and a given feature in the coding layer (**i.e. the first and second layers are related to each other for coding pattern, i.e. positioning and recorded information, and giving code pattern is divided in to cells and reference points, and parameters of coding; special relationship, i.e. matching features of first and second layer, or coding and information layers, are provided, col 4, lines 10-63**).

Regarding claim 13.

Pettersson discloses an apparatus (**referring to Fig. 7, coding pattern reproducing system**) for reproducing a set of code symbols on a substrate (**referring to Figs. 1 and 7, which a coding system can reproduce a set of code symbols on a sheet of paper**), each code symbol comprising a mark with a given location with respect to a reference point (**i.e. code symbol is divided into cells and each cell has a reference point, i.e. a unique point for positioning, Fig. 4, col 8, lines 40-67**), said apparatus comprising:

a first input for obtaining at digital representation of said set of code symbols (**referring to Fig. 7, an input means for a user to input information for desired page layout, col 11, lines 9-28**); a second input for obtaining data relating to the dot resolution of a printing device (**i.e. printer 75 is coupled with the coding device, i.e. a personal computer, which communicates with the printer for dot resolution and generating raster image and PostScript file transmission, etc. col 8, lines 48-54 and col 11, line 34 to col 12, line 29**), said dot resolution defining a two-dimensional array of dot-receiving cells with respect to the substrate (**referring to Figs. 2-4, dot resolution is a two dimensional array form, col 12, lines 50-57**); and an instruction generator which generates printing instructions to control, based on the digital representation and the resolution data, the printing device to reproduce said set of code symbols by arranging the reference point of each code symbol inside one of said dot-receiving cells and by applying at least one dot of marking material on the substrate (**i.e. a PostScript file is generated for direct printout on the printer of Fig. 7, col 11, line 34 to col 12, line 29**).

Regarding claim 14, in accordance with claim 13.

Claim 14 is directed to an apparatus claim which substantially corresponds to the operation of the device in claim 7, with identical features corresponding directly to the function of device elements in claim 7. Thus claim 14 is rejected as set forth above for claim 7.

Regarding claim 15, in accordance with claim 14.

Claim 15 is directed to an apparatus claim which substantially corresponds to the operation of the device in claim 8, with identical features corresponding directly to the function of device elements in claim 8. Thus claim 15 is rejected as set forth above for claim 8.

Regarding claim 16, in accordance with claim 14.

Pettersson discloses which is included in said printer (**Printer 75 of Fig. 7**).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pettersson et al (US 7,175,095) as applied to claim 1 above, and in view of Nadabar et al (US 6,941,026).

Pettersson does not disclose wherein the reference point is arranged essentially at the geometric center the dot-receiving cell.

Nadabar teaches wherein the reference point is arranged essentially at the geometric center the dot-receiving cell (**i.e. location of the reference point is defined as the physical center point of the cell, col 1, lines 50-55**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Pettersson to include wherein the reference point is arranged essentially at the geometric center the dot-receiving cell as taught by Nadabar. The motivation for doing so would have been to improve a quick code symbol detection (col 6, lines 1-15); and further it is easily implemented by one or other in the art with a predictable result.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Kau whose telephone number is 571-270-1120 and fax number is 571-270-2120. The examiner can normally be reached on M-F, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Steven Kau/
Examiner, Art Unit 2625
June 25, 2009

/David K Moore/
Supervisory Patent Examiner, Art Unit 2625